

## Michigan Mathematics Program Improvement (MMPI) project

Formerly State Improvement Grant to address  
Adequate Yearly Progress (SIG-AYP)  
[www.michiganmathematics.org](http://www.michiganmathematics.org)

Michigan Department of Education  
Office of Special Education

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United States Department of Education

## State and Federal Guidance

- No Child Left Behind
- Education Yes!
- Grade Level Content Expectations
- MEAP Grades 3-8
- Adequate Yearly Progress

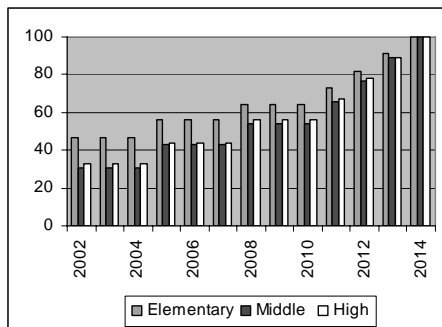
## GLCEs by Grade by Strand

GLCEs	K	1	2	3	4	5	6	7	8
Number and Operations	10	16	22	21	37	23	20	9	11
Algebra							14	13	13
Measurement	5	8	11	13	11	10	3		
Geometry	3	6	7	7	5	7	5	6	9
Data and Probability		3	3	3	3	4	2	4	7
<b>Total</b>	<b>18</b>	<b>33</b>	<b>43</b>	<b>44</b>	<b>56</b>	<b>44</b>	<b>44</b>	<b>32</b>	<b>40</b>

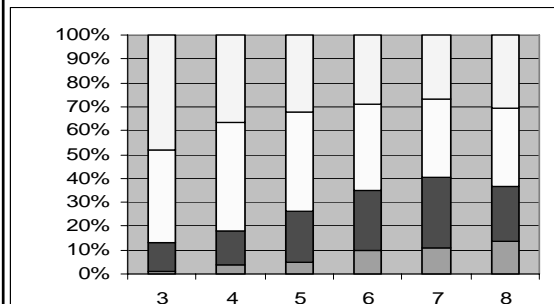
## NCLB % Proficient

Year	Elementary	Middle	High
2002-4	47	31	33
2005-7	56	43	44
2008-10	64	54	56
2011	73	66	67
2012	82	77	78
2013	91	89	89
2014	100	100	100

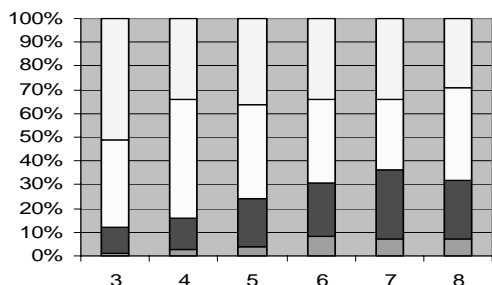
## NCLB % Proficient Requirements



## 2005 MEAP



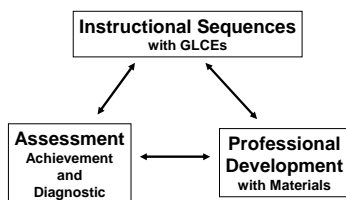
## 2006 MEAP



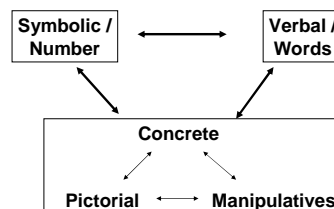
## District Curriculum Guide

- Content: What students should know and be able to do
- Instruction: How to best engage students in learning content
- Performance expectation: What we expect students to do – based upon incremental improvement
- Assessment: A measure of meeting performance expectations

## Three Program Components



## Three Instructional Components



## SIG-AYP PD Book

Introduction	
Chapter 1	Program and Instruction
Chapter 2	Place Value and Numeration
Chapter 3	Whole Number Addition and Subtraction
Chapter 4	Whole Number Multiplication and Division
Chapter 5	Decimals (Basic)
Chapter 6	Fractions (Basic)
Chapter 7	Fractions & Decimals (Intermediate)
Chapter 8	Geometry
Chapter 9	?
Chapter 10	Resources: Files and Graphics (CD&Web)
Chapter 11	Michigan Grade Level Content Expectations
Chapter 12	MEAP Grades 3 through 8
Chapter 13	MI Access

## SIG Project Focus

- Teachers of Underachieving Students
- Special Education Students Who Will Take the MEAP Test
- Continuing Support
- Diagnosis of Student Performance
- Implications for the IEP
- Instructional Interventions
- Assessment of Impact

## Unit Structure

- Introduction
- Instructional Sequence of Topics
- MEAP Data and Release Items
- Instructional Activities
- Diagnostic Inventory
- Materials

## Diagnostic Inventories

- Numeration and Place Value (1)
- Whole Number Concepts and Operations (4)
- Basic Decimal and Fraction Concepts and Operations (2)

## Numeration and Place Value Inventory

- Contextual Problems
- Concept
  - Number (Position and Quantity)
  - Place Value
    - Representations (models and symbol)
- Counting Forward and Backward
- Comparing
- Word/Numeral Translations

## Whole Number Inventory

Addition, Subtraction, Multiplication, and Division

- Concept of the Operation in Context
- Pictorial Representation of the Operation
- Using the Number Line to Compute
- Fact Families, Inverse Operations, and Identities
- Computation Format
- Computation
  - Facts
  - With and Without Regrouping (Embedded Zeros)
  - Multiple Digits (Up to 4 – Digit)

## Decimals Inventory: Basic Level

- Concept
  - Equal Partitioning
  - The Role of Zero and the Decimal Point
  - Decimal Place Value and Trading
  - Translate among Representations (models and symbol)
- Counting
- Reading and Writing Decimal Words and Numerals
- Equivalence, Comparison, and Ordering
- Basic Computation (Tenths and Hundredths – No Regrouping)

## Fractions Inventory: Basic Level

- Concept
  - Equal Partitioning
  - The Role of Numerator and Denominator
  - The Whole as the Referent
  - Translate among Representations (models and symbol)
- Counting
- Reading and Writing Fraction Words and Numerals
- Equivalence, Comparison, and Ordering
- Basic Computation (Like Denominators)